Appendices with Subnumbered Figures, Equations, Tables

This paper describes package appendix
version 2.1 from 1999/02/23

It is part of the preprint collection of packages

Summary

The stripped version of this file contains the following brief description:

```
 % Adding this package redefines “appendix so that main counters for
 % figures, tables, equations are subnumbered under the appendix.
¡plates¿ % The plate counter is also subnumbered.
 % A “noappendix command is included so that things like bibliographies
 % may be called after the appendix with “section*. It resets the sectioning
 % commands. There should be no “section commands after this though.
¡agu¿ % The appendix is formatted for AGU journals.
¡egs¿ % The appendix is formatted for EGS journals.
¡*!209¿
 %
 % LaTeX2e options:
 %    mylang (default) -¿ keeps current “appendixname
 %    english, american  -¿ sets “appendixname to  ‘Appendix’
 %    german, austrian, french, esperanto -¿ translates “appendixname
 %    blank     -¿ suppresses the word ‘Appendix’ with “appendix
 % Options processed in order given, default is mylang (no change)
¡/!209¿
```

1 Introduction

The appendices in standard LaTeX article class are fairly weak. There is no title for them and the numbering of figures, equations, etc. continue as normal within them. In book and report things are different, but that is because these objects are subnumbered under the chapters anyway.

2   Invoking the Package

The macros in this package are included in the main document with the
"usepackage command of LaTeX 2,

> "documentclass[..]–..."
> "usepackage[options]–appendix"

where the possible options are described below.

Alternatively, the name of the package is added as an option to the
"documentstyle command in LaTeX 2.09 compatibility mode, as

> "documentstyle[..appendix..]–..."

"appendix   With the package loaded, the standard command "appendix is redefined
accordingly. There is really nothing more to do.

"noappendix   An additional command also exists, "noappendix to undo the effects of
"appendix. This only makes sense for certain listings like thebibliography
environment that use "section* after the appendix. There really should be
no figures, etc. called after "noappendix is given, nor any "section com-
mands. It is only provided for "section*, and then only when "appendix
has altered the sectioning commands so that they print text (the word
'Appendix' for example) even with the starred version.

3   Extra Features

In its default coding, appendix not only subnumbers figures, tables, and
equations within appendices, it also writes the word 'Appendix' when
"appendix is called. This is done with "section*, so it will be format-
ted accordingly. The appendix titles that are printed with "section consist
of the appendix letter plus title, as in standard LaTeX. The "section com-
mand is not redefined. The subappendices (with "subsection) are numbered
without the dot, as A1, A2, etc. This deviates from standard LaTeX.

"appendixname   In fact, it is the command "appendixname that is printed as a title when
"appendix is issued. This text may be redefined with "renewcommand as
one pleases. If it is defined to be blank, then no title is printed, not even a
blank line. (See Section 4 for other ways of changing this text.)

4   LaTeX 2 Options

Under LaTeX 2, options may be added to the "usepackage command that
loads the package. The available options with this package alter the default
definition of "appendixname for other languages.

mylang (default) keeps the current value of "appendixname, or if it is un-
     defined, sets it to 'Appendix';

english, american set "appendixname unconditionally to 'Appendix';

german, austrian, french, esperanto set "appendixname to the translation of the given language;

blank suppresses the printing of the appendix title with the "appendix command.

The options are processed in the order they are given, so it is the last one always dominates.

Of course, it is always possible to redefine "appendixname to any desired text, even in LaTeX 2.09.

5   Options with docstrip

It is also intended that this package be included in the package coding for particular journals, in which case the form of the appendix may be different. Some of the docstrip options in the source .dtx file account for this. These and other docstrip options are:

package to produce a .sty package file with most comments removed;

plates to subnumber the plate counter as well; the float environment for plates must be defined elsewhere;

209 for a package file that will also run under the older LaTeX 2.09 and not just under the newer (mid-1994) LaTeX 2;

subpack (together with package) for coding that is to be included inside a larger package; even more comments are removed, as well as LaTeX 2 option handling and identification;

agu (with package,subpack) for special coding for the AGU package;

egs (with package,subpack) for special coding for journals of the European Geophysical Society;

driver to produce a driver .drv file that will print out the documentation under LaTeX 2. The documentation cannot be printed under LaTeX 2.09.

The source file appendix.dtx is itself a driver file and can be processed directly by LaTeX 2.

6   The Coding

This section presents and explains the actual coding of the macros. It is nested between %¡*package¿ and %¡/package¿, which are indicators to docstrip that this coding belongs to the package file.

The docstrip option ¡subpack¿ should only be called if the coding is to be included as part of another package, in which case the announcement text and LaTeX 2 options are suppressed.

An inferior version of this coding is provided for running as a style file under LaTeX 2.09. Code lines belonging to this are indicated with guard ¡209¿; those for LaTeXe only with ¡!209¿.

There is a problem if appendix is used with the package figcaps, which makes modifications to the sublabelling commands. Thus appendix must be read in before figcaps. This is tested with the existence of the command "iffigcaps, which should not be defined at this point.

```
 1
 2  "@ifundefined–iffigcaps″–″
 3
 4    –"PackageWarningNoLine–appendix″
 5      _********************************"MessageBreak
 6      This package read in after 'figcaps'"MessageBreak
 7      There could be problems with sublabelled"MessageBreak
 8      figure and table numbers."MessageBreak
 9      **********************************″″
10
11
12    –"@@warning
13    –^^J *****************************^^J
14      'appendix' read in after 'figcaps'^^J
15      There could be problems with sublabelled^^J
16      figure and table numbers.^^J
17      *****************************″″
18
```

"appendixname   We start by defining the word for 'Appendix' as a command so that it may be altered for other languages. It is possible that it has already been defined or even redefined, so it is only defined here if it does not exist already.

```
19  "@ifundefined–appendixname″–"def"appendixname–Appendix″″–″
20  "providecommand–"appendixname″–Appendix″
```

"DeclareOption   In LaTeX 2, the initial value of "appendixname can be set with options to the "usepackage command. They are processed in the order given, not in the order defined (starred version of "ProcessOptions).

```
21
22  "DeclareOption–english″–"def"appendixname–Appendix″″
23  "DeclareOption–american″–"def"appendixname–Appendix″″
24  "DeclareOption–german″–"def"appendixname–Anhang″″
```

```
25 "DeclareOption–austrian″–"def"appendixname–Anhang″″
26 "DeclareOption–french″–"def"appendixname–Annexe″″
27 "DeclareOption–esperanto″–"def"appendixname–Apendico″″
28 "DeclareOption–blank″–"def"appendixname–″″
29 "DeclareOption–mylang″–"providecommand–"appendixname″–Appendix″″
30 "ExecuteOptions–mylang″
31 "ProcessOptions*
32
```

"appendix   Begin the definition of "appendix. Print out the "appendixname as a "section* if it is not blank (but not for the specific journals).

```
33 "let"orisection="section
34 "let"theolds="thesection
35 "let"theoldss="thesubsection
36 "let"orisubsection="subsection
37 "def"appendix–"par
38
39   "if"@empty"appendixname "else  "section*–"appendixname″ "fi
40
```

Set the section and subsection counters to zero. I do not know why subsection needs to be reset, but this is actually standard LATEX. I can only imagine it being useful if someone calls "subsection first before "section after "appendix. I maintain it anyway.

```
41 "setcounter–section″–0″
42 "setcounter–subsection″–0″
```

Redefine "thesection to be alphabetical instead of numerical (standard LATEX). What is not standard is that "thesubsection is also redefined so that the dot is removed. In standard LATEX, the subappendices are A.1, A.2, etc.

```
43   "def"thesection–"Alph–section″″
44   "def"thesubsection–"thesection"arabic–subsection″″
```

The secnumdepth counter determines how deeply sections are numbered automatically. It is possible that this has been set to 0 to suppress section numbering (this is standard in AGU journals). However, for the appendices, this must be reactivated so that the appendix letters appear. There is no need to store the old value since there should not be any "section commands after "noappendix is given.

```
45
46   "setcounter–secnumdepth″–4″
47
48   "setcounter–secnumdepth″–3″
```

Now for each of the counters equation, figure, table, and optionally plate, make them a subnumber of section (i.e., they are reset when section stepped) and redefine the "the command.

```
49   "@addtoreset–equation″–section″
```

```
50   "setcounter–equation″–0″
51   "def"theequation–"thesection"arabic–equation″″
52   "@addtoreset–figure″–section″
53   "setcounter–figure″–0″
54   "def"thefigure–"thesection"arabic–figure″″
55   "@addtoreset–table″–section″
56   "def"thetable–"thesection"arabic–table″″
57   "setcounter–table″–0″
58
59   "@ifundefined–c@plate″–"newcounter–plate″″–″
60   "@addtoreset–plate″–section″
61   "def"theplate–"thesection"arabic–plate″″
62   "setcounter–plate″–0″
63
```

We also redefine the "@Alph command that outputs counter values as uppercase letters. If the counter is zero, it should also print the letter A, for 'Appendix'. This is intended for the case where there is only a single appendix; it should be introduced with "section* and not "section. This prints 'Appendix' rather than 'Appendix A'. However, we want the counters to be prefixed with 'A' still. In this case, the section counter is 0 and so normally nothing is printed with "@Alph.

```
64   "def"@Alph##1–"ifcase##1A"or A"or B"or C"or D"else"@Ialph–##1″"fi″
```

The specific journals all redefine "section to add the word 'Appendix'. The actual formats are all differing, but correspond to the original "section definition for each one. The word 'Appendix' is not given explicitly even though these journals publish only in English, because figcaps makes use of the command "appendixname. In the case of AGU, the word is added via the command "sectype that is normally empty.

```
65   "def"section–"@startsection –section″–1″–"z@″–-2em plus
66      -1ex minus-.2ex″–1em plus.2ex″–"reset@font
67         "if@egsbook"large"else"normalsize"fi
68      "bfseries"noindent "appendixname˜″″
69      "bf"noindent "appendixname˜″″
70   "def"section–"@sectiontrue"orisection″
71   "def"sectype–"if@section"appendixname˜"fi″
```

For AGU, there are some special characters used in the section numbering (they insist on the period being kept in section titles) that change for appendices. Furthermore, they are different for the "section and "subsection (in appendices). Thus appendix numbers should appear as

> A: B: C: C1. C2. C2.1.

To achieve this, a flag is used to tell whether "section or lower has been called.

```
72   "def"sectchar–"if@section:"else."fi″
73   "def"ssectchar–"if@section"unskip:˜"else"fi″
```

74   "def"subsection–"@sectionfalse"orisubsection″
75 ″
76 "newif"if@section "@sectionfalse

"noappendix   To turn off the appendix, or rather to restore the "section definition, use
"noappendix. This is needed so that "section* later will not print the word
'Appendix'. The secnumdepth counter can be set to 0, although it does
not really matter. The command "section, without star, should never be
given again after this point.

77 "def"noappendix–"setcounter–secnumdepth″–0″
78   "global"let"section="orisection
79   "global"let"thesection="theolds
80   "global"let"thesubsection="theoldss
81   "gdef"sectchar–.″ "gdef"ssectchar–″
82   "gdef"sectype–″
83   "global"let"subsection="orisubsection
84 ″

"reset@font   For older implementations of LATEX 2.09 (before December, 1991) the
"reset@font command does not exist. It is defined to be "relax under
normal LATEX, but does more under NFSS. In case it is not defined, add it
here.

85 "@ifundefined–reset@font″–"let"reset@font="relax″–″
86